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PROTECTING VICTORY GARDENS FROM ANIMAL PESTS

Prepared in the Division of Predator and Rodent Control

INTRODUCTION

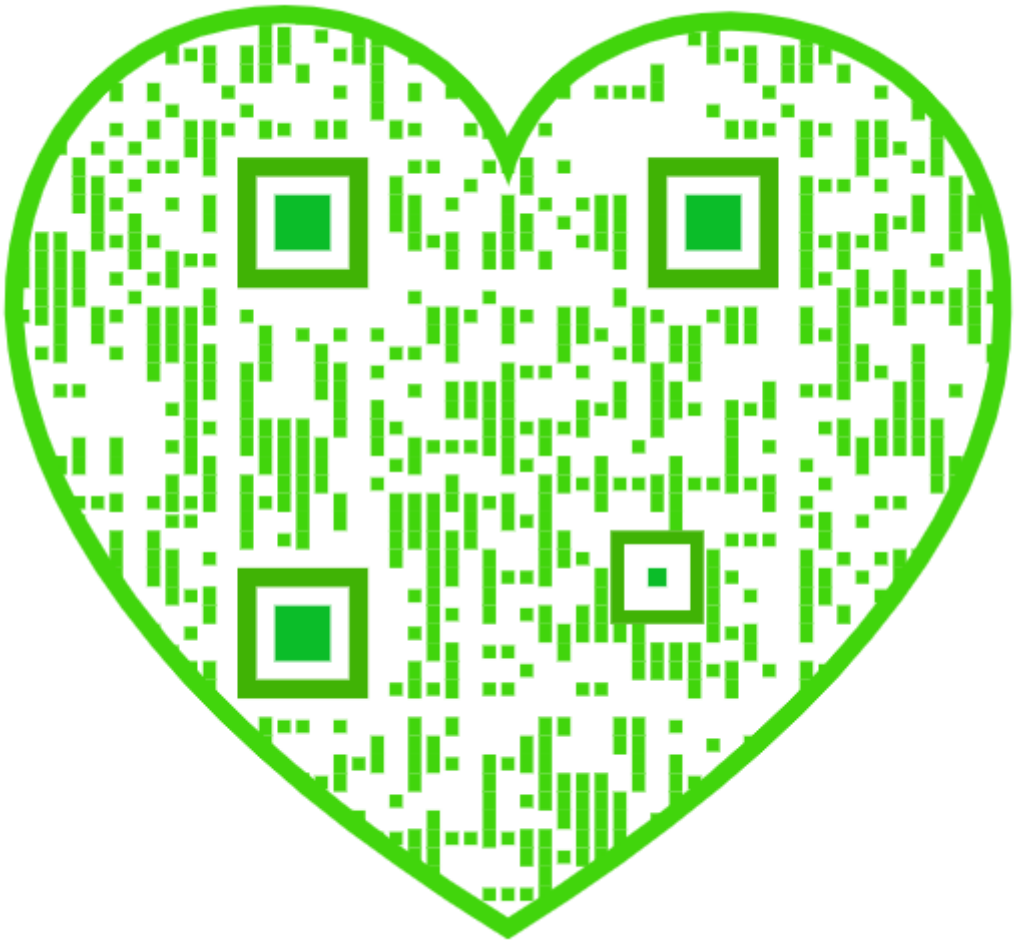
Because of the shortage of food resulting from war conditions, a great number of persons who have available ground are planting Victory gardens. For the convenience of such gardeners, methods of controlling certain animals that under some circumstances may be injurious to gardens are given herein. These include cottontail rabbits, moles, pocket gophers, field mice, ground squirrels, woodchucks, and rats.

COTTONTAIL RABBITS

Cottontail rabbits are fond of the leaves of beans, peas, and other legumes. They will also eat carrots, cauliflower, and cabbage. In localities where rabbits are known to be present, control measures should start early in the spring, by April if possible, and before planting time.

Trapping is the best method to employ in or near towns and cities. Cottontails are active late in the evening, at night, and early in the morning. During the day they conceal themselves in shrubbery, thickets, briar patches, or other cover. Rabbits do not always follow a definite trail in going to and from their regular feeding grounds, but often do have a certain fixed place where they enter a garden, and it is at such spots that the trap should be set. Cottontails travel only short distances, so by trapping them alive and releasing them at a place some distance away, a garden may be freed from these injurious animals and remain so for a season. Before beginning trapping operations, however, the State game laws should be consulted. If the removal of rabbits by traps or other means is contrary to the State or local law, information on control may be obtained from a State game conservation officer.

For trapping cottontails the Wellhouse trap (fig. 1) will prove satisfactory. This is a box 21 inches long, about 6 inches high, and 4 inches wide (inside measurements) made of 6-inch boards, preferably old ones. The box is closed at the rear and has a wire door in front, which swings inward from the top; a cleat at the bottom of the opening prevents the door from opening outward. The trap is set, and the wire door is kept open by a wire trigger rod held in place by two staples in the top of the box. The trigger rod is bent downward into a loop or figure 8 near the rear of the trap. The rabbit enters the trap and as it reaches the back part, it presses against



the loop and moves the trigger rod backward; the wire door is released and falls, and the animal is imprisoned. Baits of carrots or apples may be used but are not always necessary.

The materials required for making a Wellhouse trap are:

4 boards, 1 by 6 inches, 21 inches long, for top, bottom, and sides.
1 board, 1 by 6 inches, 8 inches long, for back.
1 small cleat for door stop.
28-1/2 inches of wire for door.
22 inches of wire for the trigger.
4 small staples for hanging door and trigger.
Nails.

This portable Wellhouse trap can be set along the fence enclosing the garden, preferably at the place where the rabbits enter, or at any other likely spot. It is well to observe the activities of the rabbits during the late evening or early morning in order to discover the best places at which to set traps. The location of the trap often determines its success.

Another trap of a permanent type suitable for taking rabbits is the Walmsley (fig. 2) which is made of sewer tile. A 12 by 6 inch T is set with the long end downward and buried so that the 6-inch opening is below the surface of the ground. Two lengths of 6-inch sewer pipe are then connected horizontally with the opening. Earth is placed over the joints to exclude light. The upright tile should be fitted with a tight removable cover--an old harrow disk or board will do. The projecting end of the small tile is surrounded with rocks, brush, or wood, so as to make the hole look inviting to rabbits and to lure them into appropriating the tiles for a place of concealment and shelter. A number of these traps set in various places, especially in the vicinity of orchards and gardens, have kept many areas comparatively free of rabbits. Rabbits occupy these tile traps, go in or out at will, and may be captured when desired. A short pole fitted with a 5-inch wooden disk may be inserted in the side opening to prevent the rabbit from escaping when it is to be removed. These traps can be permanently located about garden sites where rabbits can find few natural hiding places. The tile trap furnishes an excellent means of obtaining rabbits for the table or even for market while at the same time it affords protection to the garden.

Traps for catching rabbits alive may also be purchased on the market. Local hardware or seed-store dealers may keep them in stock or can furnish information as to where they can be procured.

Shooting is an effective method of controlling rabbits in places where it can safely be employed. It may be used on farms and in some suburban gardens, but it should not be resorted to in the more thickly populated towns and cities. Many towns have ordinances forbidding the use of firearms, but in places where it can be used, the small 410-gauge shotgun in the hands of responsible persons can be used with good results.

Experimenting with repellent substances to be sprayed or dusted on plants is not recommended, as they may cause more injury than the rabbits, and some may have little repellent value. Of the many kinds of insecticides commonly used, nicotine sprays in the strength used to destroy insects seem to have the most deterrent effect. A spray of nicotine applied late in the afternoon or in the evening at intervals of a few days apart will usually reduce rabbit injury to plants.

Rabbit-proof fencing aids greatly in protecting gardens, but at the present time fencing materials are difficult to obtain.

Cottontail rabbits are game animals and their meat should be utilized so far as possible.

MOLES

Moles in their search for food, which consists largely of insects and earthworms, burrow just below the surface of the ground, and this causes the soil to be pushed up in ridges. The damage to young plants is usually the result of the loosening or removing of the soil from about their roots, causing them to dry out and die.

The following is a simple but effective way of removing moles from gardens. With a spade or shovel, stealthily approach their runways either early in the morning when the moles are quite active or after a rain, particularly a soaking one, when they are moving through the ground looking for food. Their presence will be revealed by the movement of the soil. A quick jab of the spade or shovel into the earth behind the mole, a swift upturning of the spadeful of soil and the animal lies on top of the ground and should be disposed of quickly. Since several moles may be using the same system of runways, the ridges of earth should be leveled with the foot, and the place watched for several days to see if new workings appear.

Moles may be trapped successfully, but at the present time traps are difficult to procure. If trapping operations are to be undertaken, the runway system should be carefully examined to locate the main tunnel. A trap set in the main tunnel is more likely to make a catch. The runway should be closed firmly where the trap is to be placed. If no mole is caught within a few hours, reset the trap in another likely main artery.

POCKET GOPHERS

Pocket gophers usually burrow 4 to 8 inches below the surface of the ground. From their main runways lateral tunnels lead to the surface, where dirt excavated from the tunnel system is piled up in mounds. Pocket gophers keep the entrances to their tunnels closed and the plug generally can be seen on the flat edge of the mound.

Several inexpensive types of pocket gopher traps are usually available on the market in normal times, and even in these days some may still be obtainable from local hardware dealers in many localities. Fresh pocket

gopher mounds should be selected for the setting of traps. The main or the lateral runways which may be found by probing with a rod (like an end-gate rod) 8 inches or more from the flat edge of the mound, should be opened up and the traps set therein.

To poison pocket gophers, the runway near a freshly made mound should be located with a small rod, the opening thus made enlarged with a broomstick, and 2 or 3 pieces of poisoned vegetable bait dropped into it. The opening should then be closed, care being taken not to cover the bait. The poisoned vegetable bait is prepared by cutting sweet potatoes or carrots into pieces 1-1/2 inches long and 1/2 inch square and dusting them with powdered strychnine (alkaloid) in the proportion of 1 quart of the vegetables to 1/16 ounce of the powdered strychnine. The bait should be well stirred so that it is evenly covered with the poison.

FIELD MICE AND GROUND SQUIRRELS

The Victory gardener should not be greatly concerned with field mice. If, however, there is a grassy border at the edge of the garden plot, field mice are likely to be present. If mice occur in considerable numbers or if a comparatively large area must be freed of them, the best control method is to place strychnine-poisoned oats bait in their runways under matted grass. If the infestation is small, however, ordinary mouse traps can be used to good effect. The traps, baited with a pinch of rolled oats, should be placed across the runway so the mouse will have to run over the trigger, and then covered with grass or other material in such a way as not to interfere with its action.

Ground squirrels can be controlled with the strychnine-poisoned oats bait suggested for use against field mice by placing a teaspoonful of the bait on hard surface near a ground squirrel burrow. A calcium cyanide fumigant, obtainable from insecticide dealers, may also be used, a teaspoonful of the powder being put well down into the burrow, which should then be closed with a stone or a clod of dirt. Handle calcium cyanide only in the open air, not in buildings. Avoid breathing the dust. Information on the procuring of the poisoned-oats bait can be obtained from the local representative of the Fish and Wildlife Service or from the County Agent.

WOODCHUCKS, OR GROUNDHOGS

Gardens situated near rough, hilly, or otherwise waste land may be damaged by woodchucks. Treating the woodchuck dens with fumigants in order to destroy the animals is the most practicable method of control. The fumigant should be applied only during April, May, and June (preferably early in April) to avoid destroying other animals that may use groundhog dens in fall and winter.

Calcium cyanide and carbon bisulphide fumigants are obtainable from insecticide dealers. In using calcium cyanide, place 1 tablespoonful of the powder well down in the woodchuck burrow and close the entrance with a shovel of sod, grass-side downward. If carbon bisulphide is used, pour 3 tablespoonfuls on rags, cotton, or other absorbent material, and throw or

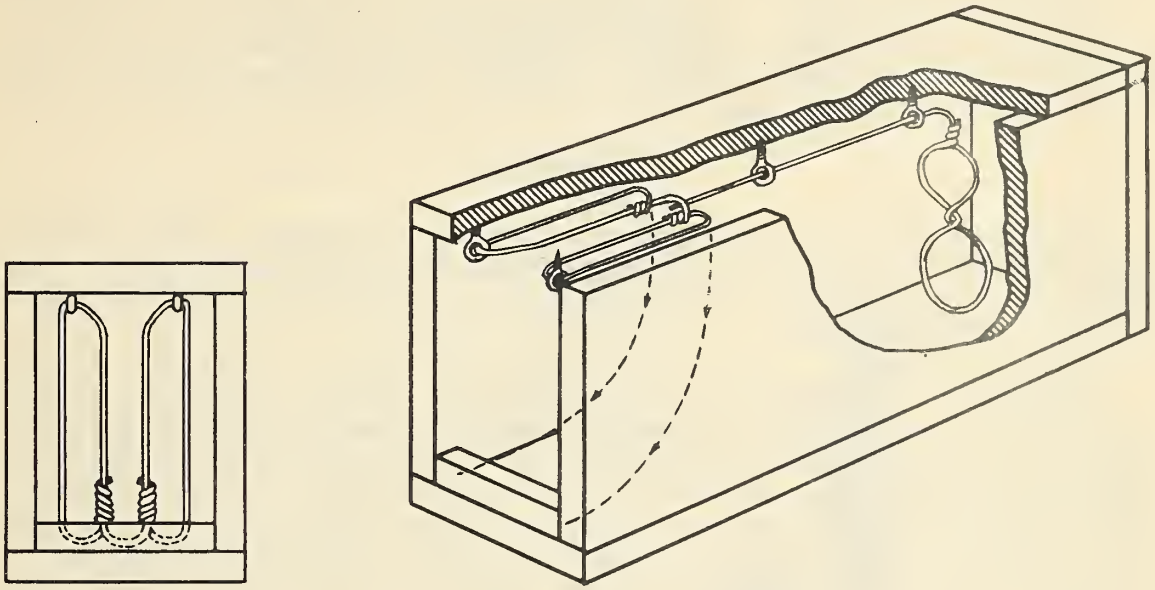


FIGURE 1. DETAILS OF A WELLHOUSE RABBIT TRAP

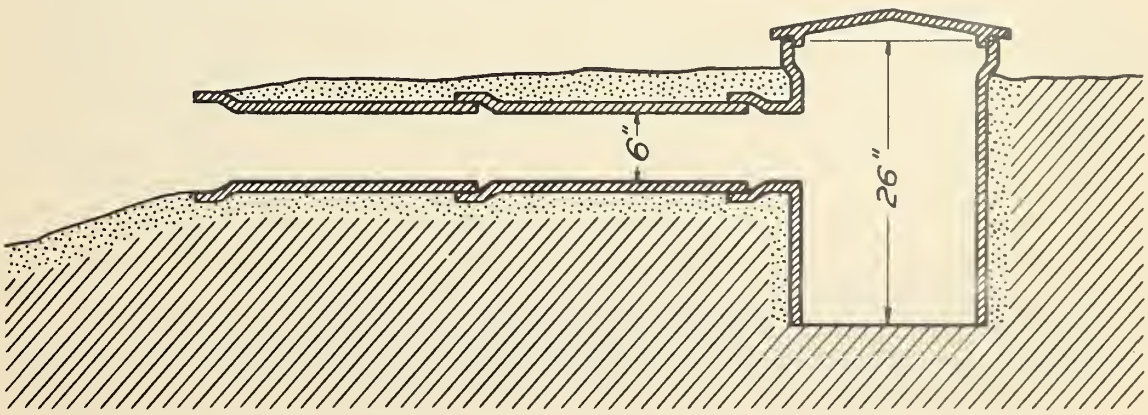


FIGURE 2. CROSS SECTION OF A WALMSLEY TILE RABBIT TRAP

place it well down in the burrow; the opening should then be closed. Treat all holes in a den. Carbon bisulphide is inflammable and must be kept away from fire.

RATS

Occasionally common rats may have burrows in the ground near gardens and feed on the vegetables. They can be removed by gassing the burrows with calcium cyanide dust, applied with a dust gun regularly used for such purposes, and then closing the holes tightly. Use calcium cyanide only in the open air, not in buildings.

BIRD PESTS

Several species of birds may be injurious to gardens. Among them the blackbirds and the crows are probably the most troublesome because of their attacks on corn immediately after planting as well as when it is in the "milk," or "dough," stage.

Devices for frightening the birds away are usually effective, particularly if they are changed frequently during the period when the garden needs protection. A frightening contrivance that is not difficult to construct consists of setting tall sticks or poles (6 to 8 feet or higher) in the ground around the garden and stringing one or two strands of twine or heavy cord between the poles. After a few days pieces of white paper may be fastened at intervals along the string, then 2 or 3 days later these could be changed to pieces of some brightly colored paper, and again to paper of a different color. Pieces of metal or mirror that reflect light from the sun or objects that make a noise in the wind may be substituted for the paper. Frightening devices are easy to install but the birds soon become accustomed to them, hence the need to change them frequently during the few weeks that birds may be injurious to the garden.

It should be borne in mind, however, that birds may be of great benefit to gardeners through their destruction of injurious insects.